8 TRANSIT

OVERVIEW

To enhance the transportation analysis being done in the South Capitol Street Gateway corridor, DDOT analyzed the corridor's multimodal capacity. Specifically, as near-term, connectivity, and advance South Capitol Street Construction Opportunities were being analyzed and considered, options for accommodating multimodal connections were an important complementary element of all new projects. Expanding the highway network in the corridor would only perpetuate past problems, further damaging area neighborhoods. Instead, an improved transit system is considered the solution for providing new transportation capacity. Although this report has referenced the consideration made to transit during project planning throughout, this chapter is a collection and an expanded discussion of how multimodal connections, emphasizing transit, can improve access in the corridor.

GOALS AND OBJECTIVES

The various transit elements considered for the corridor were compared against a set of goals. Listed below, these goals are consistent with those developed for other near- and long-term improvements in the corridor. These goals specifically reflect DDOT's commitment to providing context-sensitive solutions, mobility and accessibility options to area residents.

Goals	Objectives
Improve accessibility and connectivity for transit users	Eliminate barriers between destinations and transfer points Ensure that design of facilities complies with ADA & District Context Sensitive Design goals
Improve transportation system efficiency	Create a more intensive transit system with more aggressive service levels to improve transit connections Design for efficiency Design for a seamless operation, that capitalizes on the existing transit asset
Integrate transit into visually appealing streets and public places	Design a comfortable and enjoyable environment for all transit users
Improve safety for all transportation users	Eliminate or reduce the hazard of potential roadway & transit elements
Accommodate the creation of new development areas & economic growth	Use transit to create new development sites Integrate new sites into the existing transportation network through intermodal connections

All of the transit elements considered in this chapter are consistent with what has been developed for the future South Capitol Street. These elements also take advantage of the opportunities suggested by developments in the corridor such as the new bridge, ballpark, and Southeast Federal Center.

The findings and recommendations of this chapter are tied to the critical themes laid out in the Anacostia Waterfront Initiative Framework Plan, specifically the theme of connecting local and regional users to the new waterfront amenities.

Consistent with the goals and objectives of the near-term and connectivity improvements examined in the South Capitol Gateway Corridor and Anacostia Access Studies, the range of possible transit elements was developed to corroborate what will be possible and feasible relative to other planned improvements. In addition, the range of possible transit elements suggested in this chapter demonstrates, at a conceptual level, what is necessary to ensure mobility and accessibility for corridor residents as well as maximizing efficiency and minimizing impacts to the existing transportation network, neighborhoods and the AWI experience.

PRIMARY FINDINGS

Existing transit connections within the corridor are limited. Currently there are physical and operational barriers to seamless connections between elements of the transportation system. South Capitol Street's current urban freeway character is a barrier between the eastern and western sides of the corridor. Bus-to-rail transfer, while fairly seamless at the Anacostia Metrorail station, is more difficult at the Navy Yard station due to physical constraints. Although the Navy Yard station was designed for easy future expansion, it has yet to undergo major renovation. Beyond these two stations, the Green Line operates at capacity during the peak hours. The Green Line, and the entire regional rail and bus system, are valuable transportation assets to which subsequent transit investment should logically be linked. Pedestrian paths, the means by which the majority of transit riders access the system, are notoriously unconnected, absent, or poorly maintained.

Future growth is required to meet development plan. The area is slated for aggressive development and redevelopment in both the near and long term. Growth will accompany this development, bringing thousands of additional employees and residents to the area. This growth will be a mix of residential, commercial, office, and recreational uses and a radical departure from the present industrial land use. Near-term developments, such as the USDOT headquarters building and the Southeast Federal Center, will bring close to 7,500 new employees by 2006 and almost 6,000 new residents soon after in proposed mixed-use buildings. The new Major League Baseball facility, proposed for the area east of South Capitol Street at N Street, will potentially bring 42,000 users on game days. This will put more stress on the Green Line as well as the Navy Yard station which, while valuable transit assets, have some limitations regarding capacity.

Corridors for new transit options do exist. At this early stage of planning, there is a significant potential for new transit options in various corridors in the study area. Many of these corridors have been examined in the DC Alternatives Analysis. The proximity of this area to the downtown core, where all of the heavy rail lines meet within a few blocks of one another, provides the advantage of being able to tie those lines together through a circulator-type service or other intermodal service.

Future growth will require multiple modes and intermodal connections. The varying types of trips will necessitate development of multiple modes that are seamlessly connected. Existing intercity and regional trips handled by the system will be joined by exponentially greater numbers of neighborhood trips, as well as new regional trips, produced by the planned regional destinations: the ballpark and the Anacostia waterfront.

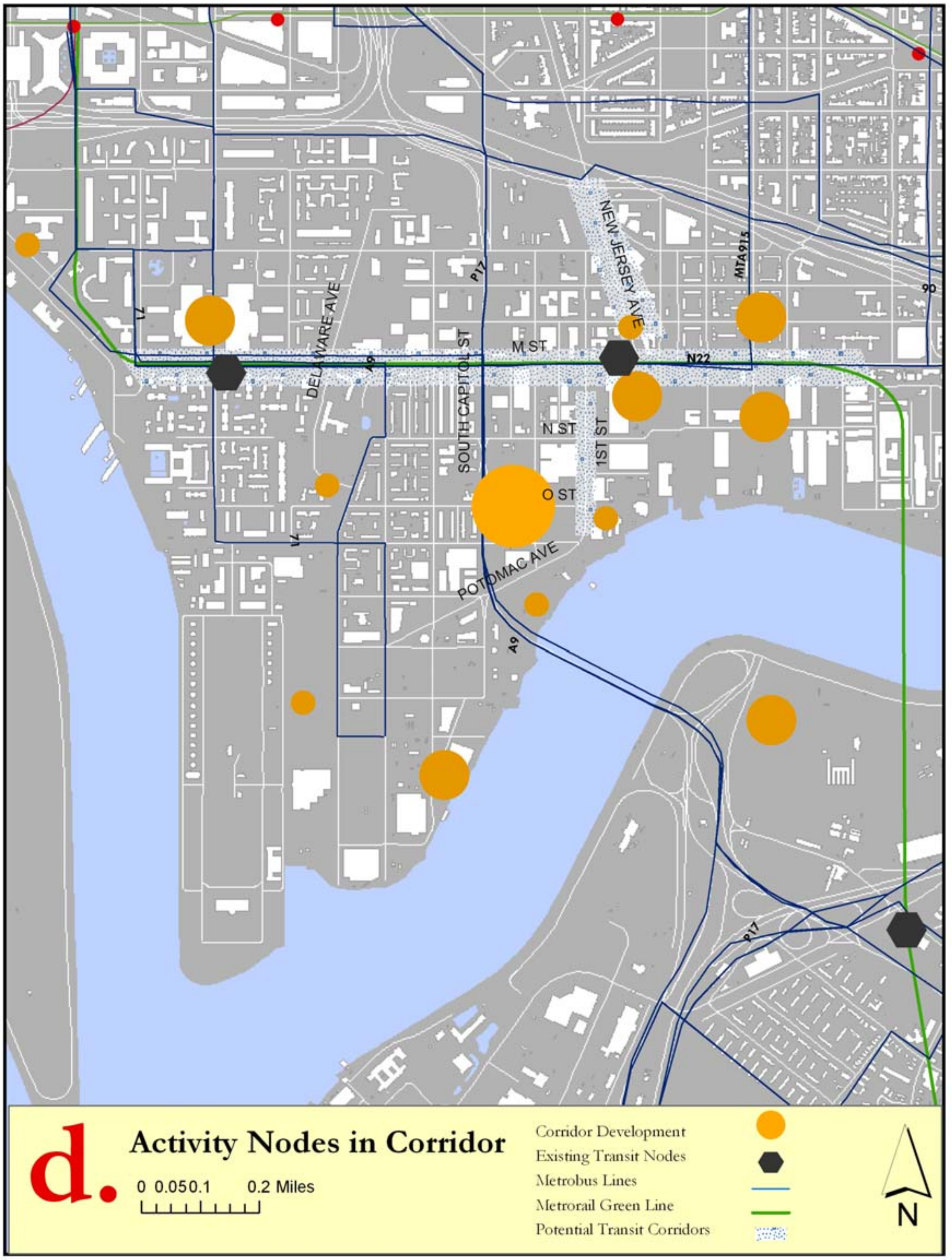
Seamless intermodal connections will be critical. Transit users like seamless connections between transit modes, be it streetcar, heavy rail, bus, or shuttle. Ideally customers prefer a one-seat ride, but if that is not feasible, making it as easy as possible to transfer modes will best serve future growth. There are few reasons, given time for proper planning and design, not to provide future users with a seamless intermodal connection. As a world-class city implementing one of the most significant redevelopment efforts of the 21st century, creating an integrated system will ensure that future components can easily be put into operation.

The current transportation system, both highway and transit, is at capacity. The system must be expanded with improvements in both raw capacity and productivity in order to safely and functionally accommodate the expected users. Simply adding capacity to the existing transit and transportation infrastructure will not best serve future growth. In fact, there are limitations on the extent to which the existing system can be expanded or retrofitted. New modes, such as bus rapid transit, water taxis, streetcars or light rail, seamlessly connected, would provide future users with a range of transit choices appropriate to their needs. Future trip growth should be handled through new transit service, in line with the District's prioritization of creating sustainable development. No constituency is well-served by expanded highway capacity.

PRIMARY RECOMMENDATIONS

There are a few corridors in the study area where potential transit enhancements make sense. These are areas where there is potential to tap into the existing transit asset and seamlessly join a new transit element.

The figure on the next page, Activity Nodes in Corridor, shows the nodes in the study area where significant future development is planned and programmed, and highlights areas where transit enhancements are particularly feasible. The relative sizes of the Corridor Development orange dots indicates higher numbers of trips based on programmed development (Source: District of Columbia Office of Planning, April 2005). These corridors include New Jersey Avenue and First Street, which have significant untapped right-of-way.



NEW JERSEY AVE
DELAWARE AVE
SOUTH CAPITOL ST
M ST
N ST
O ST
1ST ST
POTOMAC AVE
N22
A9
P17
MTA915
90
71
d.
Activity Nodes in Corridor
0 0.05 0.1 0.2 Miles
Corridor Development
Existing Transit Nodes
Metrobus Lines
Metrorail Green Line
Potential Transit Corridors
N
Source: Parsons Brinckerhoff Quade & Douglas

Corridor Wide
Short-term capacity enhancements, including potential new bus routes, signal prioritization, vehicle improvements, and comfort improvements at bus stops are all immediate measures that improve the general quality and capacity of transit in the corridor. Even just the provision of accurate information regarding routes and service times at area bus stops would greatly enhance transit service in the corridor.

New or augmented routes, vehicle improvements, and comfort improvements at bus stops would significantly improve local service, making trips within the corridor more direct and more pleasant. However, given the number of trips through the corridor that originate in outlying jurisdictions, it is clear that to complement improved local service, there should be expanded and enhanced commuter bus service from suburban jurisdictions to the corridor. Service enhancements, such as new routes or express routes, should be supported by expanded suburban facilities such as satellite parking and intermodal centers outside the beltway, or at end-of-the-line stations on the Metrorail system.

New Jersey Avenue
New Jersey Avenue cuts diagonally through the southeast quadrant of DC. Its historic alignment has it running from the Capitol building to the Anacostia Waterfront, diverted somewhat by the historic canal. For decades it was closed and consumed in the grid structure of the Navy Yard and Southeast Federal Center. However, plans for the redevelopment of the Southeast Federal Center would restore New Jersey Avenue to its historic alignment. Additionally, new housing and a hotel are under construction along New Jersey Avenue. As the most direct path between the Capitol and the waterfront, it is a natural corridor for new transit service.

First Street SE
As the new ballpark is designed and constructed and surrounding development is approved and completed, First Street SE has the potential to house several critical transit links. Specifically, it could be the staging location for shuttle and charter buses serving the new ballpark. Given the current picture of future development, First Street has the potential to be a path from the ballpark to the waterfront, and a connection, rather than a barrier, between the Southeast Federal Center and the redevelopment on South Capitol Street.

South Capitol Street
South Capitol Street may be another logical site for transit facilities associated with the new ballpark, such as Metrobus stops and taxi and chauffer service pick-up and drop-off. However, to serve daily transportation needs, improvements to Metrobus capacity and routes along South Capitol Street are necessary to make local and neighborhood connections better. As planned development in the corridor is completed, it should be well served by transit. Changes to the Metrobus routes in the corridor provide an excellent, flexible means to service new development.

South Capitol Street will be transformed into a boulevard, a gateway to the federal city. As outlined above, it will be a natural conduit for improved bus service, particularly through and local service. However, First Street SE and M Street, with their existing mix of uses, could better integrate transit into neighborhoods in the short term. They are more obliging corridors for neighborhood trips served by streetcar.

M Street SE

M Street has the potential to become a multimodal corridor. Currently a nexus of commuter bus, Metrorail, and local bus service, the addition of another mode, such as bus rapid transit or streetcar service, would enable the current modes to connect with the rest of the city. Natural nodes for new service exist at L'Enfant Plaza, the Navy Yard, and 8th Street. In addition there is the potential to connect, via the 11th Street Bridges to the streetcar line in Anacostia. The added mode should take advantage of opportunities for mixed-traffic operation, with appropriate traffic engineering measures to ensure high-quality transit service. An added mode must be in place early in the development of the area to ensure availability when new residents and employees arrive.

WMATA's Metrorail Green Line serves the corridor. The current headways and train configurations operate at capacity during the peak hour. Plans exist to increase capacity on that line by adding eight-car trains during peak-hour service, improving that service. When the eight-car trains come on line, they will help alleviate capacity problems during peak-hour service. However, as stated above, there is an opportunity for a new system to complement the regional service of the Green Line as well as the rest of the Metrorail system. New service in the M Street corridor could better meet demand for off-peak trips within the corridor.

Expansion of the Navy Yard Metrorail station is recommended in order to accommodate the residential, employment, and retail growth at this node. The new USDOT headquarters, development at Southeast Federal Center, Arthur Capper/Carrollsburg HOPE VI project, and the new ballpark will all funnel new patrons through the Navy Yard station. WMATA has developed alternatives for increasing the capacity and expanding the station.

A bus maintenance facility in the area is needed for operational reasons. A passenger intermodal facility should be located at the existing transit nodes along M Street, taking advantage of an existing transit nexus. To this end, the existing Metrobus service facility on M Street should be considered for its potential as an intermodal passenger facility that would serve the proposed development in the area. However, given the nature of future development in the M Street corridor, the bus maintenance facility in this location is no longer a natural fit. Moreover, there is not enough physical space for the maintenance facility to comfortably accommodate its current uses and a passenger intermodal facility. There may be opportunities presented to accommodate the new maintenance facilities as the infrastructure development plans for the South Capitol Street and Middle Anacostia Crossings Corridors progress to more detailed design.

A new maintenance facility in the corridor that meets the District's LID and context sensitive design guidelines will be an opportunity to transform the older facility and site into a more context sensitive intermodal passenger facility. Future development will create a natural nexus of activity at M Street and First Street SE, where regional transit users on the Metrorail system and on MTA commuter buses can be linked into a local system, such as bus, streetcar, or light rail. A well-designed intermodal passenger facility would serve these trips and provide the necessary linkages.

New Frederick Douglass Memorial Bridge

Throughout planning and development of improvements for the corridor, transit has consistently been considered and accommodated on the new bridge. The new bridge has the potential to be a distinctive multimodal path (for cars, walkers, bikers, and transit users) from the redevelopment at Poplar Point to the new South Capitol Street Corridor development.

Martin Luther King Jr. Boulevard
Martin Luther King Jr. Boulevard is the backbone of the urban village in the historic Anacostia neighborhood. It presently carries traffic southbound only from the 11th Street Bridge to W Street SE, and northbound from Howard Road to W Street SE. Plans have been considered to make MLK Jr. Boulevard consistently bi-directional. The new streetcar line would run along MLK Jr. Boulevard, serving the new development at MLK Jr. Boulevard and Good Hope Road. In the future, this line can be extended across the river, linking historic Anacostia to Washington's central business district.

In addition, MLK Jr Boulevard serves a parallel function as M Street SE. As M Street SE is the spine for office and residential development on the west side of the Anacostia River, MLK Jr. Boulevard is the spine of retail, office, and residential uses in historic Anacostia. As M Street SE relates to the Navy Yard station, so too does MLK Jr. Boulevard relate to the transit hub at the Anacostia Metrorail station. MLK Jr. serves as an important link for trips from the west side of the river, through the existing retail, office, and residential uses in Historic Anacostia, to the Green Line, and the regional transit system.

Firth Sterling
The Anacostia area has been the subject of extensive planning and study for some time as the location for new transit service, particularly new streetcar service. The service is planned to run from Pennsylvania Avenue and connect to the existing intermodal Metrorail Anacostia station at Firth Sterling. This area has the potential to serve as the first seamless connection between new and existing service. Improvements to the intermodal center in this location would link the developing Anacostia and Poplar Point areas to the regional rail system. In addition, the station's location near Suitland Parkway and the Anacostia Freeway make it easily accessible to Maryland commuter bus routes.

The new service and center would serve as a connection between the military installations at the DIA, Naval District Washington Anacostia Annex, and Bolling Air Force Base and the Anacostia neighborhood. These historic areas have had somewhat limited interactions, due to the poor pedestrian facilities and limited transit connections. It is crucial that pedestrian facilities as well as transit are provided to bring together these areas. Access to the Metrorail station will complete the transit link to downtown Washington, serving economic development in the Anacostia area.

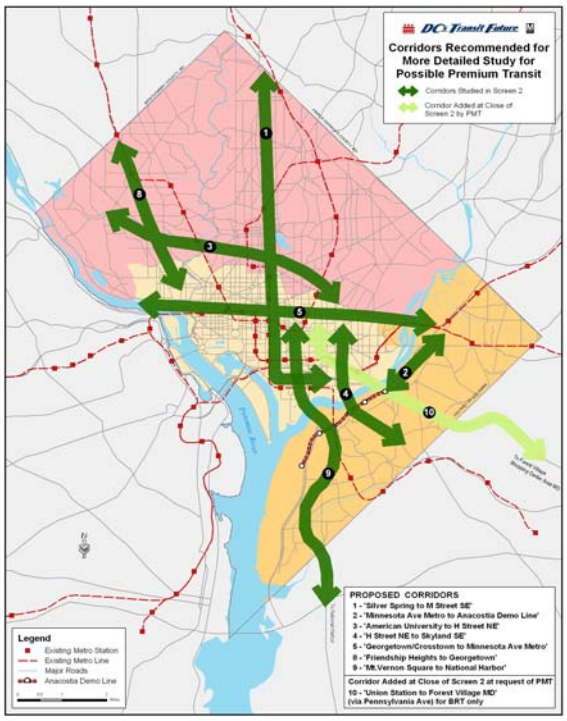
CONCLUSIONS

Improved transit in the study area will result from an aggressive program of construction and service improvements, based upon sound analysis and planning. Specific actions will include:

Anacostia Streetcar Line. The starter line will allow an assessment of the performance and acceptance of streetcars in the District. Transit riders and the streetcar's neighbors will judge through first-hand experience how the streetcar meets their needs. The streetcar line will also be a prototype enabling refinement of design elements for future applications of the technology within the District. For the line to achieve its intended purpose, close monitoring of both technical characteristics and public perceptions of the line's performance will be necessary. ***Timeframe for completion: 2007***

DC Alternatives Analysis. The transit improvement study now underway will provide substantial information on the application of new types of transit—trolleys, streetcar, light rail, and bus rapid transit—in the District. One of the study's nine corridors, the Silver Spring to M Street SE corridor, traverses the study area.

Preliminary analysis shows that this corridor has the highest overall ridership, with more than 30,000 potential new riders for premium transit service, as well as the highest ridership per linear mile of any corridor under study. This corridor strongly supports the project's access and mobility goal by serving a future population of more than 107,000, or more than 10,000 per mile, and future employment base of more than 226,000 or 22,000 per mile. It also strongly supports the project's community and economic development goal by serving four designated main street corridors, five strategically targeted neighborhoods, and seven major development initiatives.



DC Alternatives Analysis Corridors

As was pointed out in this report, a premium transit system would provide additional future transit capacity for bus routes that are currently approaching unacceptable levels of crowding during peak times. It would also provide a surface alternative to the crowded Green Line Metrorail service for short trips within the core area and adjacent neighborhoods. Finally, the preliminary analysis has stated that service in this corridor would serve neighborhoods currently without premium transit services. Specifically, the corridor serves a relatively high percentage of transit dependents and environmental justice populations.

The final analysis that the study performs on this corridor will be directly applicable to decisions to move ahead with transit improvements in the study area. ***Timeframe for completion: 2005***

Increased capacity on the Metrorail Green Line. The addition of new rail cars to the Metrorail fleet will allow the operation of eight-car trains, increasing capacity on the Green Line through the Anacostia and Navy Yard stations. ***Timeframe for completion: 2010***

Expanded Metrobus services on Buzzard Point and in the Southeast Federal Center. As the study area redevelops, new residential and employment populations will increase the demand for local bus services where there is now little or no service. DDOT, working in partnership with WMATA, Anacostia Waterfront Corporation, and Office of Planning, should monitor development levels to ensure that expanded services are introduced as early as possible. This will encourage and enable newcomers to start using transit as soon as they become part of the neighborhood. Local bus service, linked strongly with other modes, is one of the most flexible means of accommodating new transit riders. ***Timeframe for completion: 2010***

Expanded Maryland MTA bus services. Opportunities exist for expanded commuter services from suburban Maryland. Currently the M Street Corridor, specifically the Navy Yard, is well served by MTA commuter bus routes. Creating an intermodal center that can accommodate commuter buses would connect them to other system modes easily. In partnership with MTA, the District could provide new facilities and amenities to MTA passengers. ***Timeframe for completion: 2007***

Expanded satellite parking facilities. As described above, there are opportunities for expanded commuter bus services from suburban Maryland. New park-and-ride facilities in suburban Maryland would provide parking for initial carpooling and "slug" users. As new express and commuter bus service is implemented, these park-and-ride facilities could be expanded into intermodal facilities. ***Timeframe for completion: 2006***

New transit technologies. Advances in transit technologies will create new vehicle and component configurations as well as improved construction techniques and operating regimes. Application of these technologies to the study area will have the potential to improve service levels and reduce the costs of service.

One example of new technology that might be appropriate for the corridor is the pre-cast concrete track system. This type of system includes one-piece, modular, pre-cast concrete crossings. These have proven to be very durable and eliminate the need for crossties, making the crossing smoother. In addition, crossing settlement occurs in a similar manner as ballasted track crossings. The rail is attached by Pandrol e-clips. Rubber rail-groove filler inserts are also available.

Image of pre-cast concrete track system

Intermodal Center

Where many modes—bus, rail, streetcar, commuter rail— converge in a limited geographic area, as they do at several points in the corridor, providing a one-stop transfer facility, or intermodal center, significantly improves the user experience. A high-quality transit experience, provided in part through intermodal centers in this corridor, will help serve the corridor's economic development potential. There are several sites in the corridor where an intermodal center, connecting bus, rail, and streetcar, among other modes, would serve the variety of new trips in the area. Possible sites include South Capitol Street at M Street, MLK Jr. Boulevard at Howard Road SE, the eastern touchdown point of the new bridge over the Anacostia, as well as the intersection of South Capitol Street and Potomac Avenue SE.

Image of Contemporary Intermodal Center

Transit on M Street

As discussed in the report, M Street is one of the study area corridors with tremendous potential as a future multimodal transit corridor. Below are some images of what transit may look like on M Street. One technology currently in use in Portland is a streetcar, designed and constructed by Skoda.

Image of Skoda vehicle operating in Portland, Oregon